

| ☑ | Final Report |
|----------|----------------|
| | Revised Report |
| | |

Report Date: 15-Mar-18 17:00

Laboratory Report SC44660

Gulf Oil L.P. 281 Eastern Avenue Chelsea, MA 02150 Attn: Andrew P. Adams

Project: Gulf Terminal - Chelsea, MA

Project #: Gulf Chelsea

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110 Connecticut # PH-0777 Florida # E87936 Maine # MA138 New Hampshire # 2972/2538 New Jersey # MA011 New York # 11393 Pennsylvania # 68-04426/68-02924 Rhode Island # LAO00348 USDA # P330-15-00375 Vermont # VT-11393



Authorized by:

Dawn Wojcik Laboratory Director

Jawn & Woscik

Eurofins Spectrum Analytical holds primary certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 8 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

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Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC44660

Project: Gulf Terminal - Chelsea, MA

Project Number: Gulf Chelsea

Laboratory IDClient Sample IDMatrixDate SampledDate ReceivedSC44660-01Outfall 003Surface Water08-Mar-18 11:5009-Mar-18 17:45

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CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 1.2 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of \pm 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

There is no relevant protocol-specific QC and/or performance standards non-conformances to report.

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Sample Acceptance Check Form

| Project: | Gulf Terminal - Chelsea, MA / Gulf Chelsea | | | | | | |
|----------------------------|---|--------------|--------------|------------|--|--|--|
| Work Order: | | | | | | | |
| Sample(s) received on: | 3/9/2018 | | | | | | |
| | | | | | | | |
| The following outlines the | condition of samples for the attached Chain of Custody upon receipt. | | | | | | |
| | | <u>Yes</u> | <u>No</u> | <u>N/A</u> | | | |
| Were custody seal | s present? | | \checkmark | | | | |
| Were custody seal | | | \checkmark | | | | |
| Were samples rec | \checkmark | | | | | | |
| Were samples refi | Were samples refrigerated upon transfer to laboratory representative? | | | | | | |
| Were sample cont | ainers received intact? | \checkmark | | | | | |
| | perly labeled (labels affixed to sample containers and include sample ID, site roject number and the collection date)? | \checkmark | | | | | |
| Were samples acc | ompanied by a Chain of Custody document? | \checkmark | | | | | |
| include sample ID | stody document include proper, full, and complete documentation, which shall b, site location, and/or project number, date and time of collection, collector's name, sample matrix and any special remarks concerning the sample? | | V | | | | |
| Did sample conta | ner labels agree with Chain of Custody document? | \checkmark | | | | | |
| Were samples rec | eived within method-specific holding times? | \checkmark | | | | | |

Client:

Gulf Oil L.P.

Summary of Hits

Lab ID: SC44660-01 Client ID: Outfall 003

| Parameter | Result | Flag | Reporting Limit | Units | Analytical Method |
|------------------------|--------|------|-----------------|-------|-------------------|
| Total Suspended Solids | 18.2 | | 0.6 | mg/l | SM2540D (11) |

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

| Sample Identification Outfall 003 SC44660-01 | | Project # Chelsea | | Matrix Surface W | | ection Date 3-Mar-18 11 | Received 09-Mar-18 | | | | | |
|--|--------|----------------------|-------|---------------------|-----|----------------------------|-----------------------|-----------|-----------|---------|---------|-------|
| CAS No. Analyte(s) | Result | Flag | Units | *RDL | MDL | Dilution | Method Ref. | Prepared | Analyzed | Analyst | Batch | Cert. |
| General Chemistry Parameters | | | | | | | | | | | | |
| Total Suspended Solids | 18.2 | | mg/l | 0.6 | 0.3 | 1 | SM2540D (11) | 14-Mar-18 | 15-Mar-18 | CMB | 1803506 | Х |

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General Chemistry Parameters - Quality Control

| Analyte(s) | Result | Flag | Units | *RDL | Spike Level | Source Result % | REC | %REC Limits | RPD | RPD Limit |
|--|--------|------|-------|------|----------------|--------------------|-------|----------------|--------------|--------------|
| SM2540D (11) Batch 1803506 - General Preparation | | | | | | | | | | |
| Blank (1803506-BLK1) | | | _ | | Pre | epared: 14-Mar- | 18 Ar | nalyzed: 15-M | <u>ar-18</u> | |
| Total Suspended Solids LCS (1803506-BS1) | < 0.5 | | mg/l | 0.5 | Pre | epared: 14-Mar- | 18 Ar | nalyzed: 15-M | ar-18 | |
| Total Suspended Solids | 96.0 | | mg/l | 10.0 | 100 | | 96 | 90-110 | | |

Notes and Definitions

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

<u>Laboratory Control Sample (LCS)</u>: A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

<u>Matrix Spike</u>: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

<u>Method Blank</u>: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

<u>Surrogate</u>: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

<u>Continuing Calibration Verification:</u> The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

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| | TOTAL SHOOT | White the same of | 1 m | Relinquished by: | | There | Outfall utts | | Outsil 1988 | 0.000 | 0000 | (ULLA) Outfall 003 | Option 1 | Lab ID: Sample ID: | G= Grab | X1= X2= | O=Oil SO=Soil SL=Sludge A=Indoor/ | DW=Dinking Water GW=Groundwater SV | F=Field Filtered 1=Na ₂ S2O ₃ 2=HCI 3=H ₂ SO ₄ 7=CH3OH 8=NaHSO ₄ 9=Deionized Water 10=H ₃ PO ₄ | | Telephone #: 617.884.5980 | Chelsea, MA 02150 | 281 Eastern Ave | Report to Arising Admins | Descrit To: Andrew Adams | SPECTRUM AN ALVITICAL, INC. Featuring HANIBAL TECHNOLOGY | | 2 |
|--------------------------------------|--|---|--|------------------|---|-------|-------------------------|--------------------------|--------------------|--|---|---------------------------|-----------------------------|--------------------|------------|--------------------|-----------------------------------|--|--|------------|---------------------------|--------------------------------|--------------------------|--------------------------|------------------------------|---|-------------------------|--|
| | | | の発がし | Received by: | î | | | | | | | 11 81-8-5 | | Date: Time: | C=Compsite | X3= | A≡Indoor/Ambient Air SG=Soil Gas | SW=Surface Water WW=Waste Water | 3=H ₂ SO ₄ 4=HNO ₃ 5=NaOH 10=H ₃ PO ₄ 11= none | | | | | | Invo | | CH | |
| | | | | | | | | - | -+ | - | 41 | 0.5 | 鹎 | T | ype | | | e Water | 6=Ascorbic Acid | P.O No.: | | Wellesley | 80 Willian | Gulf Oil LP | Invoice To: Christopher Gill | Page | CHAIN OF CUSTODY RECC | |
| | 1, 1 | 3/9/ | 3-8-1 | Date: | | | 門 | | | 州 | SHIP | WS | \$ P | | voa | . Vials | | | Acid | | | Wellesley, MA 02481-3705 | 80 William St, Suite 400 | ק | er Gill | | FCU | |
| | | 8 1- | 8 12 | 1.2 | | | - 1 | 8 | Pa | | H | 0.00 | | - | | er Glas r Glass | | Containers | | Quote/RQN: | | 3705 | 00 | | | of 2 | STOD | |
| | _ | 745 | 220 | 0.10 J | | * | | # | | | | 7 | pel | # of | Plast | ric | | T'S | | | | | | | 5 | â | YRE | |
| N | \fraction \fract | Goroogijan Facht | \ \ \ | Temp °C | | | | | | | 9 | × | 3. | TSS | monia | • | | | 2 | | | | | | | 24 | CORD | |
| ☐ Ambient | Condition | 7 | <u> </u> | | | | | | | | Te, | | | (B) | | aphilia | lene, | | List Preservative Code below: | | San | Loc | Site |). | Proj | ä | | |
| | Condition upon receipt | report t | 1 8 | EDD format: | | | | | | * | | | | | | pride-1 | TIBLE | Analysis | vative Code | , | Sampler(s): | Location | Site Name: | | Project No: | | | |
| Red X | | 35 | aadams@g | × | - | | | 3 ≰ | * | | | | | - | | d total | phenel | * | below: | | | 281 | | | 4- | All T Min Sam | | Stan |
| Refrigerated | Custody Seals |) jen | ulfoil.com, | | | | * | - | | | | | | 10 | | | | | - <u>3</u> | | | | | | | ATs subje 24-hr not ples dispos | h TAT - E | Spo dard TAT |
| ed 🗌 DI VOA Frozen 🗎 Sqil Jar Frozen | s | jennifer.atkins@aecom.com | aadams@gulfoil.com, cgill@gulfoil.com, and | | * | | □ Group 2 PAHS - 5 pg/L | □ GGup 1 PAHs - 0-1 pg/ヒ | ethanol - 400 pg/L | π aphthalene and vinyl chi - 5 μg/, | □ BIEX - 2 pg/L; TBA - 10 pg/E ; | -Required Minimum Levels: | * Report phenol down to MDL | | ☐ Tier II* | ced* | | MA DEP MCP CAM Report? ☐ Yes CT DPH RCP Report? ☐ Yes | QA/QC Reporting Notes: * additional charges may appply | | | Eastern Ave, Chelsea State: MA | Cilicised Ferminal | Total Terminal | Gulf Chelsea | All TATs subject to laboratory approval Min. 24-hr notification needed for rashes Samples disposed after 60 days unless otherwise instructed. | Rush TAT - Date Needed: | Special Handling: Standard TAT - 7 to 10 business days |

Batch Summary

<u>1803506</u>

<u>General Chemistry Parameters</u> 1803506-BLK1 1803506-BS1 SC44660-01 (Outfall 003)